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Sentiment and status processes : a test between constitutive and mediator models

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SENTIMENT AND STATUS PROCESSES:

A TEST BETWEEN CONSTITUTIVE AND MEDIATOR MODELS

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ABSTRACT

SENTIMENT AND STATUS PROCESSES: A TEST BETWEEN CONSTITUTIVE AND MEDIATOR MODELS

by Alison Jean Bianchi

This thesis presents evidence in support of one of two alternative approaches to conceptualizing the effect of interpersonal sentiments on status behaviors, as studied within the framework of expectation states theory (Fisek & Berger, 1998). These two approaches -- sentiments as constituent elements of expectations or sentiments as mediators of expectations -- are modeled and experimentally tested within the standardized experimental setting using 80 undergraduate women as subjects. Analysis of variance (ANOVA) tests with Scheffé Post Hoc tests, a Linear Contrast test and other statistical tests are used to examine subjects' proportion of stay responses and affective responses in 4 experimental conditions. Results show unequivocal evidence in support of the "sentiment as mediator" model. Further directions for formalizing these findings are proposed.

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Introduction

Previous research has clearly demonstrated that sentiment structures[1] affect the operation of status structures within task groups. In other words, a relation between liking and disliking relationship patterns within a group and the group's status ordering has been shown. Researchers have produced evidence of sentiment structures magnifying the effect of status differences under some conditions and dampening this effect in others. The mechanism by which sentiment structures affect status structures, however, has not been convincingly isolated in these studies.

Fisek and Berger (1998) have stated that all former examinations of sentiment and status have not conclusively determined if sentiment is accurately conceptualized as a status element in the formation or the translation of task-performance expectation states. They pose the following questions: do sentiments, such as liking and disliking, act much like a status element in shaping expectation states? Or, do sentiments intervene between the formation of expectation states and their translation into status behaviors, thereby filtering the effects of expectations on behavior?

If empirical evidence reveals that sentiments are aggregated into expectation states as part of their formation process, we can support the theoretical conception that

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[1] For the purposes of this paper, we will refer to *affect* as simple, transitory emotional/bodily reactions or responses that orient an actor toward a social object (Smith-Lovin 1995) and *sentiments* as "socially constructed [enduring] pattern[s] of sensations, expressive gestures, and cultural meanings organized around a relation to a social object, usually another person" (Gordon 1981, p. 563). As Ridgeway (1994) suggests, sentiments are relatively stable affective appraisals or attitudes toward a person, such as liking or disliking, which represent the emotional potential in the relationship. Affective responses, on the other hand, are current feelings experienced within the situation. For

sentiment is a *constitutive* component of expectation states. If, however, evidence shows that sentiment intervenes between expectation states and behaviors, we must support the conception that sentiment *mediates* expectations (Fisek & Berger, 1998).

The purposes of this paper are to conceptualize the mechanism by which sentiment structures affect status structures and to present the results of an experiment that was devised to operationalize this conception. We will conclude with a discussion concerning whether the "sentiment as constituent of expectations" or "sentiment as mediator of expectations" approach is the appropriate theoretical formulation. We also propose directions for future research.

Expectation States and Status Characteristics Theory

In order to answer the questions posed by Fisek and Berger, we must first review Expectation States Theory and the process by which individuals in informal groups form status hierarchies determined by expectation states. Expectation States Theory is actually a family of theories that have at their core the status generalization process (Berger, Fisek, Norman, & Zelditch, 1977; Webster & Foschi, 1988; Wagner & Berger, 1993).

An *expectation state* is a group member's non-conscious anticipation of one (or more) other's likely useful contribution to the group goal as compared to her or his own potential offering. In a pair-wise fashion, comparisons of expectation states for self and other(s) by all group participants lead group members into *a power and prestige order* (i.e., a status hierarchy). The power and prestige order, in turn, translates into observable behaviors. Specifically, the power and prestige order governs the distribution among

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instance, we can believe that we *like* someone, but experience the *affect of warmth* when

group members of (a) opportunities to perform, (b) initiations of problem-solving contributions, (c) positive and negative performance evaluations and (d) acceptance or rejection of influence attempts when arise. Those highly ranked in the observable power and prestige order (high status group members) will enjoy more opportunities, initiate more behaviors, receive positive performance evaluations and group acceptance for their arguments during discussions than lower ranked (low status) persons.

Sentiment structures may affect these behavioral distributions (Ridgeway & Johnson, 1990; Shelly & Webster, 1997). Persons liked by others will be given more opportunities to perform and will garner more positive evaluations for their task contributions than disliked persons. These performance opportunities and positive evaluations could raise the performance expectations, and eventually change how group members are influenced when disagreements arise. Group members could perceive the persuasive discourse of liked persons as a sign of competence because during group disagreements, other group members are listening to the liked persons more often, and are positively evaluating what they are saying. This change in influence could indicate an elevation of status for liked persons. Of course, the opposite effects on influence could be true for disliked individuals.

The status generalization process occurs within groups that fall under two scope conditions: task orientation and collective orientation. *Task orientation* refers to assembled individuals having the primary motivation to achieve or solve a valued goal or problem -- that is, a goal or problem where group-produced results can be perceived by

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actually conversing with her or him.

group members as being "successfully" or "unsuccessfully" completed. *Collective orientation* refers to the recognition of group members that it is necessary and legitimate to consider all members' contributions toward completing the task. Examples of task-oriented and collectively-oriented groups are juries, sports or project teams and study groups for university classes.

Status characteristics theory (SCT), that branch of Expectation States Theory which has a formal mathematical representation, describes how expectation states determine behavior and how behavior also determines expectation states. The crucial foundations of expectation states are *status characteristics* -- any recognized social distinction that has attached to it widely shared beliefs that deem those in one social category more valued and generally more competent than others in another social category. An actor possesses the positive state of a status characteristic if she or he is classified as being in a valued social category (such as male or European American) by group members; an actor possesses the negative state if he or she is classified as being in the associated, less valued social category. A status characteristic can be either *diffuse* (broad and germane to myriad group contexts: for example: gender, race/ethnicity, or age) or *specific* (an instrumental characteristic useful in completing the particular task within the group context, such as math ability required to solve an algebraic problem).

A status hierarchy is constructed on the basis of status characteristics according to the following five theoretical assumptions: (1) salience, (2) burden of proof process, (3) combining by ordered subset aggregation and attentuation, (4) translation and (5) sequencing.

A status characteristic is activated and salient if it differentiates group members and/or is relevant to the group task. Once activated, a status characteristic will be calculated into the non-conscious expectation state unless legitimate evidence reveals that it is *not* relevant to the task (actors will behave *as if* it is relevant to judgments of task competence unless this assumption is proven otherwise). This presumed relevance is referred to as the burden of proof process.

Actors' pair-wise expectation comparisons can then be represented by a graph-theoretic structure with respect to task outcomes and status positions (see Berger, et al., 1977 for the detailed exposition of this argument). Given an actor's possession of a positive state of a status characteristic, graphed paths are connected to the expectancy of successful task outcome. Given an actor's possession of a negative state of a status characteristic, graphed paths are connected to the expectancy of an unsuccessful task outcome.

An example of path diagrams between actors person (symbolized by "p") and other (symbolized as "o") is shown in Figure 1. Figure 1a demonstrates how a diffuse status characteristic (for example, gender) is linked to successful and unsuccessful task outcomes. The positive state of the status characteristic (being male, for instance) is represented by the symbol D^+ in the graph. This positive state is linked to task competence (C^{*+}) through the burden of proof process (Γ^+). The negative state of the status characteristic (being female in this example) is represented by the symbol D^- in the graph, and is linked to task incompetence (C^{*-}) through the burden of proof process (Γ^-).

The negatively signed line between D^+ and D^- represents the dimensionality of the status characteristic.

All paths are assigned positive and negative mathematical values that reflect their strength (i.e., relevance to the task) and the state of the status characteristic possessed by the actor. Positive mathematical values are then summed into one subset value; negative mathematical values are similarly summed. The positively and negatively signed subsets are then combined to form the group member's expectation state (this is the ordered subset aggregation), which, when compared to other group members' expectation states, represents the individual's expectation advantage or disadvantage. In the example shown in Figure 1a, the actor "person" would hold the expectation state advantage, because four path lengths link that actor to task success, whereas "other" is linked more weakly to task success by five paths.

A behavioral interchange pattern acting as a status element would be graphed as shown in Figure 1b. This status element would have the same graphed properties as a diffuse status characteristic.

If one or more positive or negative state(s) of status characteristics are salient, more status characteristic information will have a less incremental effect on the expectation advantage than if the status characteristic was acting alone (the attentuation effect).

The actual order of expectation (dis)advantages rank all group members into an observable power and prestige order which governs individuals' behavior (this is the translation principle).

Finally, if actors enter or leave the task situation after its completion, the status generalization process will be reconfigured using the same principles described, but will include the new status information brought in by the new actors. However, all components of the previously fully developed status structure will remain in ensuing interactions (Webster & Foschi, 1988). This process describes the sequencing effect of status generalization.

The power and prestige order of a task group is not static; rather, once established, this order can evolve with behavioral feedback to expectations (Fisek, Berger, & Norman, 1991). This feedback can come in the form of previous successes and/or failures on tasks, behavior interchange patterns, evaluations of actors within the situation by other outside actors and emitted task cues (Fisek & Berger, 1998). These devices operate as status information generated within the situational context that can dynamically modify expectations and thus the power and prestige order itself.

With this theoretical framework in mind, the question for our analyses becomes: does sentiment behave as a status element as in the processes described, or does it filter and mediate behaviors that should be directly induced by the power and prestige order (perhaps changing the initial power and prestige order)? Superb work has already been done to help us answer this question, but a satisfactory conclusion has not been reached. We now consider the existing evidence.

Status and Sentiment Structures

The effects of affect and sentiment on status structures have been studied since the early 1960s. For instance, Leik (1963) found that gender and age status distinctions

directly determined unequal behavior differences in temporary families, but did not determine these differences in intact families (Leik assigned a father, mother and daughter from different families to form temporary families for the purposes of his investigation). This study's implication was that sentiment processes, as well as perhaps other processes (such as control processes), modified status processes and their effects on behavior within the intact families, and thus modified the status hierarchies. Heiss (1962) also found proof of the dampening power of sentiment on status processes: he discovered that in the heterosexual couples he investigated, as the intimacy of the pairs increased from dating to engagement, male dominance within the pairs decreased.

Hurwitz, Zander and Hymovitch (1960, p. 800) found evidence of dampening of status effects through sentiment when they showed that individuals who wanted to improve their low status positions in groups did so by communicating positive sentiment (liking) "upwards as a form of substitute locomotion." Meeker and Weitzel-O'Neill (1977) corroborated this evidence by showing that women and others with external status characteristic disadvantages could become highly influential in task groups if they overcame their low status by mixing their assertive task behaviors with expressions of positive sentiment in the form of friendly, cooperatively intended behaviors (Ridgeway, 1982).

Lovaglia and Houser (1996) and Lovaglia (1997) have shown that group participants' negative emotion increased their resistance to a partner's influence, thus magnifying the status advantage of high status group participants. This resistance was witnessed in low status experimental treatments, where one could argue that status

differences were being dampened as the low status person increasingly rejected the influence of the disliked high status confederates.

Driskell and Webster (1997) found that if sentiment is the only information differentiating group members, there is no modification to the influence exerted by group participants on each other. However, they found that sentiment and status have combined effects – low status subjects who disliked their task partners rejected influence at a higher rate than high status individuals. Shelly and Webster (1997) presented evidence that positive sentiment was a status magnifier, suggesting that adding positive sentiment to activated formal position and status structures may allow a leader to exert influence more *effectively.* This efficacy was achieved because liked leaders exerted more influence with fewer task behaviors than leaders regarded with neutral sentiment. Shelly, Troyer, Munroe and Burger (1999) showed that an activated sentiment structure increases the influence of the liked persons when status structures are present; however, interestingly, an advantaged actor's influence in the form of average act duration declined if that liked actor held a formal position of authority in the task group.

The dampening and magnifying properties of sentiment on status structures have been documented by these aforementioned studies. However, the mechanism by which they occur has not been definitively isolated. Berger (1988) has hypothesized that affect and sentiment could operate much like status elements. Once activated by an event within a task group, an "affect state" could direct one's behavior toward the other and vice versa in a mutually positive or negative fashion. The "affect state" could create a salient expectation of how behavior will be organized during an interaction – whether the

interaction will be cordial and complimentary or caustic and critical, for example. The actors will usually break this affect-driven interaction rather quickly, however, as other considerations within the group arise. Berger (1988) also suggests that interaction occurrences motivated by affect will cause actors to form more enduring sentiments toward others (a notion supported by Johnston's (1988) study that showed how personality attributions toward the other are often triggered by affect-driven interactions). Therefore, while "affect states" are much more transitory than expectation states, they could have long-term consequences for the ordering of status hierarchies. Despite these interesting ideas and findings, neither Berger nor Johnston explicitly establishes that "affect states" somehow combine with expectation states.

Shelly's (1993) study did isolate the sentiment mechanism that organizes interaction. He showed, on the one hand, that positive sentiment afforded actors with slightly more performance outputs, action opportunities and positive reward actions than those in a control condition. He also showed, on the other hand, that liked actors are afforded much less of these behaviors than those in a condition where one group member possessed the positive state of a salient specific status characteristic. This study did not include a test for a dependent variable quantifying influence (a variable typically used in Expectation States experiments to determine the status properties of independent variables). Therefore, it is difficult to determine if sentiment mediated status behaviors or acted as a status characteristic in this instance (see *Formulation of Problem* section). Shelly (1999) later designed a vignette study that attempted to separate status and

sentiment processes – the results of this study somewhat indicated that sentiment was acting as a constitutive status element.

A Decision-Making Model for Status Characteristics Theory

A standard experimental setting has been developed by expectation states theorists (see Berger & Conner, 1969) to examine whether particular elements of interaction are in fact operating as status characteristics. This setting is based on the Camilleri and Berger Model for Decision-Making (Camilleri & Berger, 1967; Camilleri, Berger, & Conner, 1972). This model is presently used for our purposes of isolating sentiment and describing its organizational properties for interaction. As such, a model description and how it can be used to systematize the problem at hand is required.

The decision making model is derived from the theory (Homans, 1961) that when an actor is faced with a determination between mutually exclusive alternatives, she will make her decision based on the probability of rewarding and punishing consequences that she foresees as associated with the choice of each alternative (Camilleri & Berger, 1967). The actor will be compelled to select that alternative which is anticipated to maximize her positive utility (with reward and gain); the actor will reject the alternative that will not likely bring her as much rewards or gains or may bring her negative utility (punishments, sanctions, etc.).

In the standard experimental setting, a pair of subjects is asked to make such a choice between two alternatives as a team, albeit in two steps. First, subjects are presented with the choices, and then asked to make a preliminary, independent decision between the alternatives. Next, the subjects are given each other's initial choice results.

Taking their partner's initial choice into consideration, subjects make their final choice between the alternatives. This final choice is not communicated to the subject's partner, but the subjects are led to believe that the final choices will be appraised as "correct" or "incorrect," and that some aggregation of these final choices will form an overall score for the team task. In this decision making situation, the subjects choose alternatives based on the probability of expected approval (rewards) or disapproval (punishments) from their partners, the experimenter and themselves. Subjects would anticipate receiving the disapproval of their partners, a poor evaluation by the experimenter, and personal discouragement, if they make the "incorrect" final choice and negatively contribute to the overall task score. Subjects would anticipate the opposite effects for choosing the "correct" answer.

In this model, influence is indicated by how often a subject changes his or her initial choice if this choice is different from the partner's initial choice. In other words, if a subject *stays* with his or her initial choice (even if the choice is different from the partner's) when making the final choice, it can be surmised that the subject was not influenced by the partner. Typically, to measure the rate of stay responses (referred to as a *P(s)* response or measure), subjects are presented with a large number of initial choice disagreements from their partner, interspersed with a small number of agreements, and are asked to make final decisions after taking their partners' choices into consideration. This stream is in some way, of course, manipulated by the experimenter.

Camilleri and Berger (1967) found that two parameters within the experimental setting can vary the P(s) measure: the assigned expectation states of the subjects, a

structural parameter of interaction, and the control over the team product, a situational parameter. Prior to the aforementioned decision-making process, subjects can be manipulated into believing that they possess certain amounts of ability to make the "correct" decisions. Subjects can be informed that they have superior or below average ability (denoted as "+" or "-") for making the task decisions. They can also be informed that their partners have either high or low ability. These beliefs constitute the expectation advantage, disadvantage or no advantage subjects have vis-à-vis their partner based on this assigned, experimentally devised specific status characteristic. Expectation (dis)advantages create the structural difference of a status hierarchy between the subject and the subject's partner.

Four combinations of expectation states for the subject and partner are possible: high ability for the subject and partner (denoted as [+,+]), low ability for the subject and partner ([-,-]), high ability for the subject and low ability for the partner ([+,-]) and finally, low ability for the subject and high ability for the partner ([-,+]). Numerous experiments have shown that based on these assigned abilities, the higher the expectation advantage of the subject relative to the partner, the less the likelihood that the subject will be influenced by the partner's choice (see Wagner & Berger, 1993, for some examples) and vice versa. Thus, a status characteristic is activated and operating to organize interaction in the [+,-] condition if subjects' mean P(s) measure is greater than subjects' mean P(s) measure for the [+,+] condition. Similarly, if subjects' mean P(s) measure for the [-,-] or [+,−] conditions is greater than the mean P(s) for the [-,+] condition, a status process has occurred.

The subject's control over the team product will also vary the P(s) measure. A subject may be informed that her and only her scores for the final decision count toward the overall team performance score. In this case, the subject has full control or responsibility for the team outcome; i.e., she has full decision-making rights and her partner is acting only as an advisor. Subjects may be informed that their final choices are weighted equally when the overall team score is calculated. And, subjects may be informed that they have no control or decision-making rights over the team outcome, and that their final choices will not be counted in the overall team product.

The level of control or responsibility for the team decision is a situational parameter for the task, and like other situational factors, such as level of task orientation, it often governs how efficacious performance expectations are in determining behavior. Camilleri and Berger (1967) found that the greater the subject's decision making control or responsibility, the greater the likelihood that she will be influenced by the decisions of her partner. On the one hand, a subject fully responsible for the team outcome will garner approval (rewards) from her partner and the experimenter and minimize their punishments (in the form of disapproval) by accepting more influence from her partner than a subject with equal or no responsibility for the overall task score. The no responsibility subject, on the other hand, need not be as concerned about these negative sanctions, as her contribution to the team score is minimal. Thus, a full-responsibility (*Decision Maker*) experimental condition should produce a mean P(s) score for subjects' rate of rejecting influence that is lower than the equal and no responsibility (*Advisor*) conditions' mean P(s) response.

Formulation of the Problem

Given these trends for P(s) responses, we can derive predicted patterns for mean proportion of stay responses that would demonstrate whether sentiment is acting as a constitutive or mediating element in the translation of performance expectations into status behaviors. These predicted patterns are presented in Table 1.

Note that Assumption 1 of both the Constitutive and Mediator Pattern predicts that the mean P(s) responses are higher for the Advisors than the Decision Makers in the Neutral Sentiment Conditions. This reflects the Camilleri and Berger (1967) finding that the greater the subject's decision-making control or responsibility, the greater the likelihood that she will be influenced by the decisions of her partner. The mean P(s) responses will be higher for Advisors in the Neutral Sentiment Condition versus the those in the Negative Condition. This follows the evidence in prior research that the reaction to negative sentiment between partners will create a higher rate of rejection of influence.

Holding all other performance expectations constant, if negative sentiment is acting as a status element, an expectation advantage between subjects will be evident in the form of approximately equally higher mean P(s) responses for neutral and negative sentiment conditions (Constitutive Pattern, Assumption 2). This increase in P(s) response should be evident despite whether or not these conditions vary the control of the team product, which is a situational and not a structural parameter. This prediction is based on findings generated from the decision-making model's results which show that the pattern for expectation advantage between conditions ([−.-]) will be indicated by higher P(s) responses than for conditions having no expectation advantage ([−.−]).

A possibility exists that the mean P(s) difference between Advisors will be slightly less than the mean P(s) difference between Decision Makers. The reason for this possibility is that Camilleri and Berger (1967) found that as the expectation advantage increased between Advisors or between Decision Makers, there was less of a decrease in mean P(s) responses between Advisor experimental conditions than between Decision Maker conditions. This finding is reflected in the Constitutive Pattern, Assumption 2 equations.

Holding all other performance expectations constant, if negative sentiment is mediating the translation of performance expectations into behavior, then we would expect very little if any change in the mean P(s) responses between neutral and negative sentiment conditions of subjects with full responsibility (Decision Makers) for the team product. In this case, those actors with full responsibility for the task outcome would not take into account the negative sentiment between themselves and their advisors because they have total accountability for the team outcome and face the consequences of severe negative sanctions especially from their partner if their choices are "incorrect." We would expect an larger increase in mean P(s) responses between the neutral and negative sentiment conditions of subjects with no responsibility (Advisors) for the team product. Advisors with no responsibility for the team product would be free to reject the influence of their partners, towards whom they feel negative sentiment. If only advisors rejected influence, we could conclude that sentiment is mediating between performance expectations and status behaviors because it is not creating a unified change in

performance expectation as indicated by mean P(s) responses. These assumptions are formalized by the Mediator Pattern Assumption 2 equations.

Methods

Experimental Design

A test of the level of mean proportion of stay response patterns requires four experimental conditions -- a two by two factorial design. Factor one is level of decision-making rights and responsibilities -- subjects will be assigned "Advisor" or "Decision Maker" roles. Factor two is sentiment -- subjects will be induced to have neutral (no) or negative sentiment towards their partners.

Subjects' expectation advantage relative to their partners will be held constant at the high ability level to: (a) control for expectation differences across conditions, (b) strengthen the likelihood of high levels of subjects' task-orientation (those believing they have high ability tend to be more engaged in group tasks than those who believe they have low ability) and (c) eliminate the possibility of high variances in mean P(s) responses as was produced by the [-,+] or [+,-] expectation advantage in the Driskell and Webster's (1997) version of this experiment.

Negative rather than positive sentiment will be used as a comparison between sentiment levels because in previous research, negative sentiment has consistently been shown to raise mean P(s) responses. Positive sentiment has less consistent experimental results (see especially Lovaglia & Houser, 1996). Moore and Isen (1990) also suggest that to isolate the effects of negative (or positive) sentiment, the basis for comparison of sentiment should be between neutral and positive or neutral and negative experimental

conditions and not positive and negative conditions. They argue that liking and disliking may in fact be distinct cognitive processes. Finally, negative sentiment has been shown to be inconsistent with high status (Lovaglia & Houser, 1996), and thus should create larger differences in mean P(s) responses between conditions than would positive sentiment. As such, we utilize a neutral and negative sentiment experimental manipulation.

For the constitutive pattern, despite assigned Advisor or Decision Maker roles, the difference between the neutral and negative conditions should be approximately 0.12, as is the difference shown in similar conditions by Driskell and Webster (1997). For the mediating pattern, no difference between Decision Maker mean P(s) responses across sentiment conditions should exist; however, the predicted 0.12 difference for the Advisor conditions should be in evidence.

If Decision Makers are lead to believe that their partners have equally high ability for making the "correct" final choices, and sentiment is not creating a status difference between subjects and partners, then it is reasonable to assume that all Decision Makers will change their initial choices about 50% of the time.

Subjects

Subjects in this study were eighty-six, 17- to 19-year-old female students at San Jose State University. Approximately 70% of these subjects were voluntary participants in a subject pool for students taking the introductory Psychology course. The other 30% were recruited from other classes on campus. Six cases were excluded from the sample

due to erroneous data collection procedures. The final sample size was 80, which was 93% of the original number.

Subject pool students were screened for their age and gender by an experiment sign-up sheet which displayed the request that only those in the specified age range need sign-up for scheduling purposes. Non-subject pool recruits were asked to fill out a pre-experiment survey that asked for their gender, age and other demographics. Subject pool students were given class credit for their participation; non-subject pool recruits were paid $10 for their participation in the experiment.

The use of only female subjects was chosen for experimental expediency; however, the issue of whether or not females and males respond in the same manner to manipulations within the standardized experimental situation is not resolved. Fisek, Norman, and Nelson-Kilger (1992), analyzing data from 12 experiments, found that females appear to change their levels of rejecting influence more than males for the same difference in expectations. On the other hand, Fisek, Berger, and Norman (1995) found no significant interaction of gender with the rate of influence rejection when analyzing data from 32 other experimental conditions. Thus, the choice of using subjects of one gender versus another is left to the discretion of the experimenter. However, we cannot rule out the possible effect of gender on rates of rejection of influence, and thus caution must be taken when generalizing these results.

Subjects were randomly assigned to one of the four experimental conditions.

Procedures

Subjects were seated at a desk in an individual laboratory room. A computer, clipboard and writing utensils were provided. Subjects were then informed that they would be involved in a group study which would be divided into two parts: (1) an individual task that would check their individual level of performance at a "perceptual task" and (2) a group task where they would be working with a partner as a team to check their group level of performance on a similar perceptual task. Subjects were informed that their partner was seated at an identical computer in the next individual laboratory room. They were told that although they would not be able to directly view their partner, they would be able to communicate with her during the team task through their computers, as the computers were networked. (In fact, there were no partners in these experimental tests -- a computer program, described later, simulated partners' responses and choices). Subjects were informed that their only requirements would be to try their best to determine the correct answers during the individual phase of the test, and to work with their partners as a team to try and best determine the correct answers during the team phase of the study. At this point, a consent form was administered to the subjects, stressing the voluntary nature of the study.

Throughout the study, the experimenter left the individual laboratory room after giving instructions to the subject under the guise that she would be administering the same instructions to the subject's "partner."

Once subject consent was received, subjects were given an Experimental Information Sheet and were instructed to record relevant information throughout the experiment on the sheet, which would be attached to a clipboard for their convenience.

Next, the subjects were asked to fill out a questionnaire entitled the "Basic Value Orientation Index." This questionnaire was much like Driskell and Webster's (1997) "Team Cohesiveness Index" in that it purported to measure the extent of team members' compatibility. The subjects were told that those individuals with similar scores on the questionnaire responses would tend to like one another due to the fact that they shared similar fundamental values and attitudes. Those with scores that were very dissimilar, the subjects were told, might dislike one another, be incompatible and would not likely become friends in new social situations.

The Basic Value Orientation Index questionnaire consisted of a set of statements by which the subject was instructed to rate herself (for example, the subject decided whether statements such as "I like challenges," "I like what I do for a living," and "I am a hard and steady worker" were very, somewhat or not at all descriptive of herself), a set of statements by which the subject would rate a possible team member (for example, the subject was asked to decide if it was very, somewhat or not at all important to have a work partner that "shows up on time," "abides by the rules," or "is creative") and a set of statements that truly or falsely described her feelings about working in teams. After the subjects had completed this questionnaire, they were informed that their scores and their partner's scores for this index would be tabulated by the experimenter and revealed to them prior to the second phase of the study (the team task). This type of compatibility manipulation has been used in experiments as early as Back's (1951) and Berkowitz's (1957) studies of group cohesion.

Phase One of the experiment commenced at this point -- the "Individual Contrast Sensitivity Test." "Contrast sensitivity," the ambiguous task commonly used in Expectation States research (for example, Berger, Cohen, & Zelditch, 1972; Moore, 1965, 1968), involved having the subject view a series of 25 computer screens, each containing two rectangles composed of white and black squares. Subjects were asked to determine which square had the most white area. In actuality, both squares had nearly equal areas of white and black. However, the subjects were led to believe that there was a "correct" and "incorrect" answer choice. Subjects were told that their answers and their "partners' " answers would be stored in the computer and evaluated. The results of the test would be relayed to them prior to the Team Contrast Sensitivity test. The computerized version of the "contrast sensitivity" test used for this experiment was adapted from the Foschi, Sigerson, Lai, and Foschi (1990) computer software by Troyer (1996).

Once the Individual Contrast Sensitivity test had been completed by the subject and "partner," the experimenter took a Polaroid photograph of the subject. The subject was told that her "partner's" picture would also be taken and that these photographs would be exchanged between the study's participants so that they would have more information about one another. A confederate's picture[2] was given to the subject after the

[2] Confederates between the ages of 17 and 19 were chosen to be photographed in the same laboratory room used for the study. Four confederates of Asian, Latino, African and European American origin were chosen, so that control of the race/ethnicity status characteristic would be accomplished. All confederates were female, so that control of the gender status characteristic would also be accomplished. Confederates were instructed to pose with neutrally expressive and natural facial countenances so that no likely affective response would result from viewing their photographs.

subject's photograph had developed. This procedure was executed to ensure that the subject believed she was in fact working with another team member.

Subjects were now given instructions and information needed to complete Phase Two of the experiment -- the Team Contrast Sensitivity Test. Via the computer, subjects were informed that they and their partner had scored in the superior range according to National Standards on their Individual Contrast Sensitivity Tests, establishing the [+,+] expectation state configuration. This information was to be recorded on the Experiment Information Sheet. Subjects were then given instructions pertaining to how the Team Contrast Sensitivity test would be executed.

For the Team Contrast Sensitivity Task, 25 sets of two black and white squares would appear on the computer screen. Subjects would be prompted to choose the square with the most white area independently from her partner. Partners' "initial" choices would be relayed to subjects; subjects would then be asked for a final determination of the square with the most white area. The computer program was configured to generate 20 out of 25 initial choice disagreements between the subjects and their "partners."

The Team Contrast Sensitivity Task was set up to achieve task-orientation and collective-orientation in the following fashion: subjects were informed that their team score would be evaluated based on the same type of National Standards as their Individual Contrast Sensitivity tests. Subjects were also prompted to make sure that they took their partners' choices into consideration when making their final choices.

Subjects were also informed of the random assignment of Decision Maker versus Advisor roles between subjects and partners. The Decision Maker would be fully

responsible for the team score – only her final choices would be counted. The Advisor would recommend initial choices to the Decision Maker, but her final scores would not be counted toward the team outcome. Advisors did make final choices, but just for the record. The computer then informed subjects which role they would play in the Team Contrast Sensitivity test.

Depending on the condition, subjects were asked by the experimenter whether they had been "randomly" assigned the role the "Decision Maker" or "Advisor" for the Team Contrast Sensitivity test. A placard with either "Decision Maker" or "Advisor" printed on it was placed at the top of the subject's computer to remind her of this designation. Subjects were also instructed to record this information on their Experiment Information Sheet.

Also depending on the condition, subjects were given feedback on the Basic Value Orientation Index tests. If the subjects were assigned to the negative sentiment conditions, they were reminded that the usefulness of this test was that it quantified fundamental values, beliefs and attitudes of a person. They were also reminded that those persons with similar Basic Value Orientation Indices would have compatible personalities and would tend to like one another. Those with dissimilar Indices would not have compatible personalities and would maybe even dislike one another.

A fictitious graphic result was presented to the subject. I had scales of five categories of individual traits and a scale for a team preference measure. The five categories of individual traits were: (1) structure -- professedly used to gauge an individual's need for formal rules to complete a task; (2) consideration -- ostensibly

measuring an individual's thoughtfulness or sympathetic regard for others when working in a group; (3) authority -- "measuring" an individual's need to have an authority figure direct the person in a group task; (4) sociability -- supposedly measuring how sensitive an individual is to social niceties; and (5) flexibility -- "measuring" how adaptable one is to different social situations. The team preference measure ostensibly measured whether one likes to work in a group collectively or prefers the egocentric work of going it alone on a task. Subjects were led through each of these categories and told, according to their questionnaire responses, that they were: (1) much less in need of formal rules than their "partner," (2) much more considerate than their "partner," (3) much less in need of an authority figure to direct them than their "partner," (4) more polite and sociable than their "partner" (although the "partner's" score was about average for this measure) and (5) much more flexible in social situations than their "partner." Subjects were told that they scored very high on the Team Preference Measure, indicating their preference and comfortable feelings toward working in groups, while their "partners" scored very low, indicating their preference to work alone. In summary, subjects were informed that they were not compatible with their "partners," would probably not be friends with them and might even dislike each other. (These results were of course not the actual results of the questionnaire, but rather the negative sentiment experimental stimulus.) Subjects were instructed to record the summary of these outcomes on their Experiment Information Sheet that indicated that they would probably be very incompatible with their partner and would probably not like them.

If the subjects were assigned to the neutral sentiment conditions, the Basic Value Orientation Index Test was administered to them. However, no feedback on their or their "partners'" Basic Value Orientation Indices was given.

The Team Contrast Sensitivity Task was administered to the subjects and "partners." After the subjects completed this phase of the experiment, they were given a post-test questionnaire, administered to calibrate quality control and to provide dependent measures of affective responses. The post-test questionnaire was composed of questions, the responses to which were semantic-differential type items as proposed by Heise (1969) and adapted from Lovaglia and Houser (1996). Subjects were asked to answer these questionnaire items, choosing a number ranging from 1 to 7 on scales anchored by opposing adjectives that describe affective responses to the experimental manipulations (Lovaglia & Houser, 1996). Questions assessed subjects' affective responses to initial and final decisions as well as their performance and their "partners'" performance.

Finally, an experimental debriefing was administered to subjects that included an explanation of the study, revealing all procedures utilized. The debriefing also included questions designed to check the efficacy of experimental manipulations. These sessions were tape recorded. The subjects were asked for a commitment not to inform other possible subjects of the experiment's content. A post-session consent form was given that allowed the experimenter to keep subjects' data now that the subject had knowledge of the arrangements involved in the experiment. If the subject was from the Psychology class subject pool, then course credit forms were completed by the experimenter. If the subject was a non-pool participant, she was then paid for her participation.

Statistical Tests

Independent Samples T-tests and oneway analysis of variance (ANOVA) tests were conducted to determine if statistically significant differences among means of experimental conditions were present.

Scheffé Post Hoc tests were conducted to determine which mean(s) were in fact significantly different from each other. The significance level of Scheffé's test was designed to allow all possible linear combinations of group means to be tested, not just pairwise comparisons (Scheffé, 1953). As a result, a larger difference between means is required for significance than other Post Hoc tests. Based on this procedure, Winer, Brown and Michels (1991) concluded that the Scheffé Post Hoc test is the most conservative of the ANOVA Post Hoc tests. The Scheffé test could also be used to determine homogeneous subsets of means. That is, the Scheffé test could produce results which determine whether means of specific conditions could be grouped together as significantly similar.

A Linear Contrast Test (Montgomery, 1997), a test of the possible statistically significant difference among differences between condition means, was performed. That is, a test to determine if the difference between the Decision Maker Neutral and Negative Conditions' mean P(s) response and the difference between the Advisor Neutral and Negative Conditions means were statistically significantly distinct was conducted.

Principle component factor analysis for a test of the valid extraction of partners' performance as the underlying dimension unifying a group of related post-experiment questionnaire items was performed (Tabachnick & Fidell, 1996).

Post-Experiment Interview Analysis

Subject responses to one of the post-experiment interview questions were quantified for analysis. Answers to the question "did you take the results of the Basic Value Orientation Index, showing how your partner and you would probably dislike one another, into account during the Team Contrast Sensitivity Test?" were quantified to reveal how status and sentiment processes were operating during the team task.

Results and Discussion

Manipulation Checks

In the post-experiment questionnaire, subjects were asked to quantify their feelings about this statement: "when making the final decision for the set of patterns, I felt ...". Subjects were provided with opposing adjective responses to this statement with rating scales from 1 to 7 (1 representing "strongly agree" and 7 representing "strongly disagree"). The opposing adjectives provided subjects with a method to quantify their affective responses about feeling (a) assertive, (b) burdened by the decision, (c) anxious, (d) worried, (e) aggressive, (f) resentful, (g) "sure of self," (h) responsible, (i) concerned, (l) confident, (m) angry and (n) certain about their final decisions.

Independent sample t-tests were conducted for differences between the Decision Maker and Advisor Condition subjects' mean responses to the statement. Means were not statistically significant for the affective responses for assertion, anxiousness, aggression, resentfulness, sureness of self, confidence, anger or certainty of response. Statistically significant mean responses were reported for answers pertaining to feeling burdened by the decision ($t=2.08$, $p<.05$), worried ($t=2.31$, $p<.05$), responsible ($t=7.56$, $p<.001$) and

concerned (t=3.12, p<.01). Decision Makers reported feeling more burdened by their final decisions (Mean=3.95, Standard Deviation=2.10) than did Advisors (M=4.85, SD=1.75). Decision Makers reported feeling more worried about their final decisions (M=3.90, SD=2.13) than did Advisors (M=4.95, SD=1.93). Decision Makers reported feeling more concerned about their final decisions (M=2.83, SD=1.87) than did Advisors (M=4.03, SD=1.56). And finally and most dramatically, Decision Makers reported feeling more responsibility for their decisions (M=1.78, SD=1.10) than did Advisors (M=4.30, SD=1.74).

All of these t-test results indicated that the experimental manipulation of assigning roles with asymmetrical decision-making responsibilities was successful. Decision Makers were more concerned, and even more worried and burdened by their final decisions for the overall team task score, than were Advisors. Most importantly, Decision Makers felt highly responsible for their final decisions, whereas Advisors felt almost no responsibility.

Subjects were also asked to report their affective responses to the question: "In reference to impressions of my partner, I feel my partner was ... ." Similar seven point semantic differential, opposing adjective responses to this statement were provided for the subjects, quantifying these responses toward their partner: (a) pleasant, (b) likable, (c) fair and (d) reasonable. Independent samples t-tests were conducted for differences between the Neutral and Negative Sentiment Condition subjects' mean responses to the statement. Statistically significant mean responses were reported for answers pertaining to feeling their partner was pleasant (t=-5.50, p<.001), likable (t=-7.07, p<.001), fair (t=-

3.46, p<.001) and reasonable (t=-2.35, p<.05). Those in the Neutral Conditions felt their partners were more pleasant (M=2.38, SD=1.31) than those in the Negative Conditions (M=4.03, SD=1.37). Those in the Neutral Conditions felt their partners were more fair (M=2.33, SD=1.20) than those in the Negative Conditions (M=3.28, SD=1.22). Those in the Neutral Conditions felt their partners were more reasonable (M=2.41, SD=1.25) than those in the Negative Conditions (M=3.08, SD=1.27). And finally and most dramatically, those in the Neutral Conditions felt their partners were much more likable (M=2.23, SD=1.14) than those in the Negative Conditions (M=4.18, SD=1.32).

Clearly, the experimental manipulation for neutral versus negative sentiment was successful.

Tests for Constitutive or Mediator Patterns of Sentiment

The results of the proportion of stay responses (P(s)) for each experimental condition are presented in Table 2. Oneway analysis of variance (ANOVA) tests for differences between among the means of these stay responses revealed that at least one of these means was statistically significantly different from the others (F=6.62, df=3, p<.001).

Scheffé tests revealed that means of stay responses were significantly different between Conditions 1 and 4 (p<.01), the Decision Maker with Neutral Sentiment and the Advisor with Negative Sentiment Conditions. Similar tests also revealed that the mean P(s) responses for Conditions 2 and 4, the Decision Maker with Negative Sentiment and the Advisor with Negative Sentiment Conditions, were significantly different (p<.01).

The Scheffé test for Homogeneous Subsets showed that the grouping of the mean P(s) responses for the two Decision Maker Conditions and the Advisor with Neutral Sentiment Conditions approached statistical significance ($p<.08$). These results showed that these means could be considered statistically similar. while the mean P(s) response for the Advisor with Negative Sentiment Condition was not statistically similar to the other mean P(s) responses.

The Linear Contrast Test showed no statistical difference in the differences between mean P(s) responses of the two Decision Maker Conditions and the two Advisor Conditions.[3]

The experimental results of mean proportion of stay responses was strikingly similar to the predicted pattern of these responses for the "sentiment as mediator" approach. The Decision Maker mean P(s) responses were nearly identical. Clearly. the Decision Makers in the Negative Sentiment Condition did not take the demonstrated disliking experimental stimulus into account when making their final decisions. In fact. these nearly identical mean P(s) responses showed unequivocal evidence that Decision Makers with high responsibility for overall team outcomes *disassociated* the status and sentiment processes. In other words. despite demonstration of negative sentiment between their partners and themselves. all Decision Makers accepted the influence of their high ability partners about 57% of the time.

Advisors experiencing Negative Sentiment toward their partners. however. did have higher rates of rejecting influence than those Advisors experiencing no sentiment.

[3] See Appendix for these mathematical results.

The difference in these rates was 0.067, approaching the difference predicted. Surprisingly, no statistical difference was found between these means. This may be due, perhaps, to the moderate level of negative sentiment applied. Since only Advisors had differing rates of rejection of influence with sentiment stimuli, it can be concluded that sentiment is mediating the Advisor's behavior by affecting the translation of expectation states into behavior.

Means and standard deviation measures of all questions from the post-experiment questionnaire that pertain to judgments of partners' ability are presented in Tables 3 and 4. Table 3 showed mean response results to the question "who do you actually think has the most Contrast Sensitivity?"[4]. A oneway ANOVA test revealed that the difference among the means of these self-report items was statistically significant ($F=2.92$, $df=3$, $p<.05$). A Scheffé Post Hoc test revealed that it was the statistically significant difference ($p<.05$) between the subjects' responses in the Advisor Conditions of Neutral and Negative Sentiments that was driving the oneway ANOVA test result. No other differences between these means were found to be statistically significant.

Table 3's results provided more substantiation to the argument that sentiment is mediating expectation states' translation into behavior. Decision Makers reported that they believed that they and their partners had equal (and high) Contrast Sensitivity ability, despite sentiment condition. Advisors with no sentiment stimuli believed that their partners had slightly more Contrast Sensitivity than they had. Advisors with

[4] Subjects were given this possible range of answers to the question: (1) I think I have more Contrast Sensitivity ability than my partner, (2) I think we both have about the same

negative sentiment stimuli believed that they and not their partners had slightly more Contrast Sensitivity Ability. Again, the mediation effect of sentiment was in evidence -- negative sentiment did not affect the beliefs about competence for Decision Makers. Sentiment and status processes were again disassociated. Negative sentiment did affect the competence beliefs of Advisors toward their partners, but since this belief effect was not consistent across all conditions, we can conclude that sentiment is mediating the behaviors of the Advisors.

Table 4 presented results for the mean semantic differential responses to the statement "I would evaluate the performance of my partner as ...". Given rating scales from 1 to 7 (1 representing "strongly agrees" and 7 representing "strongly disagrees") for opposing adjectives (such as "Competent-Incompetent and Influential-Not Influential at All), oneway ANOVA tests for the differences among the mean of these self-report items were statistically significant for the mean response of opposing adjectives ratings for Helpful ($F=4.53$, $df=3$, $p<.01$), Influential ($F=3.14$, $df=3$, $p<.05$) and Skillful ($F=4.08$, $df=3$, $p<.01$). Oneway ANOVAs were not statistically significant for the Competent, Sure of Self, or Confident mean responses.

A principle component factor analysis for partners' performance measures was done, revealing factor loadings in excess of .71. Tabachnick and Fidell (1996) reported that variables with principle factor component loadings exceeding .71 were "excellent" results for the test of a pure measure of a factor; variables with these factor results have greater than 50% overlapping variance.

Contrast Sensitivity ability, and (3) I think my partner has the more Contrast Sensitivity

On average, Decision Makers believed that their partners were more helpful and, most importantly, more skillful than Advisors believed that their partners were. Again, we were presented with more evidence supporting the mediator versus constitutive model.

Strangely, those in the Neutral Sentiment Conditions believed that their partners were more influential than those in the Negative Sentiment Conditions believed their partners were. However, an examination of the variances of this variables, especially in the Decision Maker with Negative Sentiment and Advisor with Neutral Sentiment Conditions, revealed higher variances than for most other mean statistics in this Table.

As mentioned, during the post-experiment debriefing interview, subjects in the Negative Sentiment Conditions were asked: "did you take the results of the Basic Value Orientation Index, showing how your partner and you would probably dislike one another, into account during the Team Contrast Sensitivity Test?" Of the Advisors, 95% of subjects responded affirmatively to this question; of the Decision Makers, only 50% responded in the affirmative. The one Advisor who answered "no" to this question, when probed, gave this explanation for her response: "Whenever I work with anyone, I will always find a reason to like someone, or some point that we are the same on [sic]. So ... your test was interesting, but I didn't really take it into consideration." Of the 10 Decision Makers who answered "no" to this question, seven subjects' explanations for their response can be summarized by one young woman's: "Those psychological tests are baloney. I never believe any results of those things. I've taken a bunch of them in

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than I.

magazines and they're never right." The other three respondents who answered "no" to this question gave no explanation for their answers when probed (typically, these respondents just said: "I don't know, I just didn't think about that."). Interestingly, no Advisors made any comment to the experimenter questioning the validity of the Basic Value Orientation Index.

This systematic denial of the validity of the Basic Value Orientation Index supported all previous findings. Only Decision Makers questioned this Index's validity. This qualitative evidence further confirmed that the sentiment and status processes were not in any way combined for them. Decision Makers in fact actively worked to disallow any affect of the negative sentiment stimuli. This was, of course, not the case with the Advisors, all but one of whom reported that knowing their partner did not like them affected how they came to their final decisions.

Conclusion

We have discovered a task situation where sentiment and status processes disassociate. In this task situation, those with full responsibility for the task outcome did not incorporate an activated sentiment process as a status element into the expectation state formation process. As a result, we can conclude that sentiment mediates the effects of status on behavior rather than constituting a status element itself. Thus, the "sentiment as mediator" is the proper theoretical formulation approach to take when modeling the sentiment process within the Expectation States theoretical framework.

For future research, two more conditions with more extremely assigned negative sentiment could be conducted. We could perhaps create a more stable and stronger

method of assigning negative sentiment that would produce stronger statistically significant results, especially between the Advisor with Neutral and Advisor with Negative Sentiment Conditions. We could also combine the effects of negative sentiment and negative affect to create more extreme negative sentiment subject responses. Results from these experiments would hopefully provide confirmation for our findings that Decision Makers will disassociate status and sentiment processes (even in cases of profoundly higher negative sentiment assignment than presently tested).

Further support for our findings would also make an important contribution for the theoretical formalization of the sentiment process within the Expectation States theoretical tradition. Fisek and Berger (1998) state that the P(s) response can be mathematically represented in the following fashion:

$$P(s) = m + q\,(e_p - e_o)$$

where m and q are parameters capturing both the subject population effects (for example, older subjects tend to have smaller differences in overall rates of rejection of influence amongst themselves) and the situational effects (for example, higher levels of task orientation affect the efficacy of expectation advantages) on expectation advantages, represented by $e_p - e_o$ in this formula. If sentiment is indeed a variable affecting the situation parameter q, then its formal mathematical representation, perhaps in functional format, could be developed.

Finally, we must also explore the processes associated with positive sentiment to determine whether it too is acting as a mediator between the translation of expectation

states and behavior. Positive sentiment may yet prove to have different organizing properties for interaction than negative sentiment.

Works Cited

Back, K. W. (1951). Influence through social communication. Journal of Abnormal and Social Psychology, 46, 9-23.

Berger, J. (1988). Directions in expectation states research. In M. Webster, Jr. & M. Foschi (Eds.), Status generalization: New theory and research (pp. 450-474 & 522-528). Stanford, CA: Stanford University Press.

Berger, J., Cohen, B. P., & Zelditch, M., Jr. (1972). Status characteristics and social interaction. American Sociological Review, 37, 241-255.

Berger, J., & Conner, T. L. (1969). Performance expectations and behavior in small groups. Acta Sociologica, 12, 186-197.

Berger, J., Fisek, M. H., Norman, R. Z., & Zelditch, M., Jr. (1977). Status characteristics and social interaction. New York: Elsevier Press.

Berkowitz, L. (1957). Liking for the group and the perceived merit of the group's behavior. Journal of Abnormal and Social Psychology, 54, 353-357.

Camilleri, S. F., & Berger, J. (1967). Decision-making and social influence: A model and an experimental test. Sociometry, 30, 367-378.

Camilleri, S. F., Berger, J., & Conner, T. L. (1972). A formal theory of decision-making. In J. Berger, M. Zelditch, Jr., & B. Anderson (Eds.), Sociological theories in progress: Vol. 2 (pp. 21-37). Boston: Houghton Mifflin Company.

Driskell, J. E., & Webster, M., Jr. (1997). Status and sentiment in task groups. In J. Szmatka, J. Skvoretz, & J. Berger (Eds.), Status, network, and structure: Theory development in group processes (pp. 179-200). Stanford, CA: Stanford University Press.

Fisek, M. H., & Berger, J. (1998). Sentiment and task performance expectations. Advances in Group Procresses, 15, 23-39.

Fisek, M. H., Berger, J., & Norman, R. Z. (1991, July). Participation in heterogeneous and homogeneous groups: A theoretical integration. American Journal of Sociology, 97(2), 1114-1142.

Fisek, M. H., Berger, J., & Norman, R. Z. (1995, November). Evaluations and the formation of expectations. American Journal of Sociology, 101(3), 721-746.

Fisek, M. H., Norman, R. Z., & Nelson-Kilger, M. (1992). Status characteristics and expectation states theory: A priori model parameters and test. Journal of Mathematical Sociology, 16(4), 285-303.

Foschi, M., Sigerson, K., Lai, L., & Foschi, R. (1990). A computerized setting for expectation states research. Paper presented at the West Coast Conference on Small Group Research, Lewis and Clark College, Portland, Oregon.

Gordon, S. L. (1981). The sociology of sentiments and emotion. In M. Rosenberg & R. H. Turner (Eds.), Social psychology: Sociological perspectives (pp. 562-592). New York: Basic Books.

Heise, D. R. (1969). Some methodological issues in semantic differential research. Psychological Bulletin, 72(6), 406-422.

Heiss, J. S. (1962). Degree of intimacy and male-female interaction. Sociometry, 25, 197-208.

Homans, G. C. (1961). Social behavior: Its elementary forms. New York: Harcourt, Brace & World, Inc.

Hurwitz, J. I., Zander, A. F., & Hymovitch, B. (1960). Some effects of power on relations among group members. In D. Cartwright & A. Zander (Eds.), Group dynamics: Research and theory, (2nd ed.) (pp. 800-809). Evanston, IL: Row, Peterson & Company.

Johnston, J. R. (1988). The structure of ex-spousal relations: An exercise in theoretical integration and application. In M. Webster, Jr. & M. Foschi (Eds.), Status generalization: New theory and research (pp. 309-326). Stanford, CA: Stanford University Press.

Leik, R. K. (1963). Instrumentality and emotionality in family interaction. Sociometry, 26, 131-145.

Lovaglia, M. J. (1997). Status, emotion and structural power. In J. Szmatka, J. Skvoretz, & J. Berger (Eds.), Status, network, and structure: Theory development in group processes (pp. 159-178). Stanford, CA: Stanford University Press.

Lovaglia, M. J., & Houser, J. A.. (1996, October). Emotional reactions and status in groups. American Sociological Review, 61, 867-883.

Meeker, B., & Weitzel-O'Neill, P. A. (1977). Sex roles and interpersonal behavior in task-oriented groups. American Sociological Review, 42, 91-105.

Montgomery, D. C. (1997). Design and analysis of experiments. New York: John Wiley & Sons, Inc.

Moore, B. S., & Isen, A. M. (1990). Affect and social behavior. In B. S. Moore & A. M. Isen (Eds.), Affect and social behavior (pp. 1-21). Cambridge, UK: Cambridge University Press.

Moore, J. C., Jr. (1965). Development of the spatial judgement experimental task (Tech. Rep. No. 15). Stanford, CA: Stanford University, Laboratory for Social Research.

Moore, J. C., Jr. (1968). Status and influence in small group interactions. Sociometry, 31, 47-63.

Ridgeway, C. L. (1982, February). Status in groups: The importance of motivation. American Sociological Review, 47, 76-88.

Ridgeway, C. L. (1994). Affect. In M. Foschi & E. J. Lawler (Eds.), Group processes: Sociological analyses (pp. 205-230). Chicago: Nelson-Hall Publishers.

Ridgeway, C. L., & Johnson, C. (1990). What is the relationship between socioemotional behavior and status in task groups? American Journal of Sociology, 95(5), 1189-1212.

Scheffé, H. A. (1953). A method for judging all possible contrasts in the analysis of variance. Biometrika, 40, 87-104.

Shelly, R. K. (1993). How sentiments organize interaction. Advances in Group Processes, 10, 113-132.

Shelly, R. K. (1999). How performance expectations arise from sentiments. Paper presented at the Third International Group Processes Conference, Krakow, Poland.

Shelly, R. K., Troyer, L., Munroe, P. T., & Burger, T. (1999). Social structure and the duration of social acts. Social Psychology Quarterly, 62(1), 83-95.

Shelly, R. K., & Webster, Jr., M. (1997). How formal status, liking, and ability status structure interaction: Three theoretical principles and a test. Sociological Perspectives, 40(1), 81-107.

Smith-Lovin, L. (1995). The sociology of affect and emotion. In K. Cook, G. Fine, & J. House (Eds.), Sociological perspectives on social psychology (pp. 118-148). Boston: Allyn & Bacon.

Tabachnick, B. G., & Fidell, L. S. (1996). Using multivariate statistics (3rd ed.). New York: Harper Collins College Publishers.

Troyer, L. (1996). An adaptation of the computerized standardized experimental setting. Iowa City, IA: University of Iowa, Center for the Study of Group Processes.

Wagner, D. G., & Berger, J. (1993). Status characteristics theory: The growth of a program. In J. Berger & M. Zelditch, Jr. (Eds.), Theoretical research programs: Studies in the growth of a theory (pp. 23-63). Stanford, CA: Stanford University Press.

Webster, M., Jr., & Foschi, M. (1988). Overview of status generalization. In M. Webster, Jr. & M. Foschi (Eds.), Status generalization: New theory and research (pp. 1-20). Stanford, CA: Stanford University Press.

Winer, B. J., Brown, D. R., & Michels, K. M. (1991). Statistical principles in experimental design (3rd ed.). New York: McGraw-Hill.

TABLE 1

Predicted Constitutive or Mediator Patterns for Mean Proposition of Stay Responses (P(s)) by Control/ Responsibility and Sentiment Conditions

	Advisor	Decision Maker
Neutral Sentiment [+ , +]	P_{11} (3)	P_{12} (1)
Negative Sentiment [+ , -]	P_{21} (4)	P_{22} (2)

Constitutive Pattern

Assumption 1: $P_{21} > P_{11}$ AND $P_{11} > P_{12}$

Assumption 2: $(P_{21} - P_{11}) <= (P_{22} - P_{12})$

Mediator Pattern

Assumption 1: $P_{21} > P_{11}$ AND $P_{11} > P_{12}$

Assumption 2: $(P_{21} - P_{11}) > (P_{22} - P_{12})$ AND $P_{22} = P_{12}$

TABLE 2

Means (and Standard Deviations in parentheses) and ANOVA with Scheffé Post-Hoc Tests[a] for Differences among the Mean Proportion of Stay Responses (P(s)) by Condition, Controlling for Expectation State Advantage ([+,+])[b]

Study Condition	*n*	Mean P(s)	Contrast Condition (1)	(2)	(3)
(1) Decision Maker, Neutral Sentiment (P_{12})	20	.448 (.171)			
(2) Decision Maker, Negative Sentiment (P_{22})	20	.428 (.116)	.020		
(3) Advisor, Neutral Sentiment (P_{11})	20	.538 (.155)	.090	.110	
(4) Advisor, Negative Sentiment (P_{21})	20	.605 (.125)	.158*	.178*	.675

* $p<.01$ (two-tailed tests)

[a] The Scheffé Tests for the Mean Difference between Conditions are displayed in the Contrast Condition columns. The F-Statistic for the ANOVA test equaled 6.62 (df=3, $p<.001$).

[b] N is 80 Undergraduate Women.

TABLE 3

Means (and Standard Deviations in parentheses) and ANOVA Tests for Differences among the Means of Self-Report Items Measuring Subject's Estimate of Partner's Performance for Study Conditions: 80 Undergraduate Women

Variable	End Points of Three-Point Scale[b]	Study Condition Number[a] (1)	(2)	(3)	(4)	F-Statistic (df=3)
Performance Item: "Who do you actually think has the most Contrast Sensitivity?"						
Contrast Sensitivity Ability	Me -- My Partner	2.05 (.51)	2.05 (.40)	2.37 (.60)	1.85 (.67)	2.92*
Number of Cases[c]		19	20	20	20	

* $p<.05$ (two-tailed tests)

[a] Study Conditions are: (1) Decision Maker, Neutral Sentiment, (2) Decision Maker, Negative Sentiment, (3) Advisor, Neutral Sentiment, and (4) Advisor, Negative Sentiment.

[b] The dimensions of the Three Point scale can be summarized as follows: (1) I have more Contrast Sensitivity ability than my partner; (2) my partner and I have equal amounts of Contrast Sensitivity ability; (3) my partner has more Contrast Sensitivity ability than me.

[c] A missing case exists due to the failure of one subject to respond to this post-experiment survey item.

TABLE 4

Means (and Standard Deviations in parentheses) and ANOVA Tests for Differences among the Means and Principle Component Factor Loadings of Self-Report Items Measuring Subject's Estimate of Partner's Performance for Study Conditions: 80 Undergraduate Women

Variable	End Points of Seven-Point Scale	Study Condition Number[a] (1)	(2)	(3)	(4)	F-Statistic (df=3)	Factor Loadings
Performance Items: "I would evaluate the performance of my partner as:"							
Competent	Competent -- Incompetent	2.30 (1.42)	2.75 (1.33)	2.80 (1.15)	3.10 (1.25)	1.31	.83
Helpful	Helpful -- Not Helpful at All	1.90 (1.25)	2.80 (1.58)	3.00 (1.34)	3.55 (1.57)	4.53**	.83
Sure of Self	Sure of Self -- Unsure of Self	2.55 (1.43)	3.05 (1.36)	2.85 (1.23)	3.25 (1.41)	0.97	.86
Influential	Influential -- Not Influentional at All	2.35 (1.31)	3.20 (1.82)	2.90 (1.45)	3.75 (1.25)	3.14*	.73
Skillful	Skillful -- Lacking Skill	2.45 (.89)	3.10 (1.25)	3.20 (1.24)	3.60 (.75)	4.08**	.73
Confident	Confident -- Unconfident	2.35 (1.39)	3.00 (1.17)	2.95 (1.23)	3.20 (1.01)	1.84	.72
Number of Cases		20	20	20	20		

* $p<.05$, ** $p<.01$ (two-tailed tests)

[a] Study Conditions are: (1) Decision Maker, Neutral Sentiment, (2) Decision Maker, Negative Sentiment, (3) Advisor, Neutral Sentiment and (4) Advisor, Negative Sentiment.

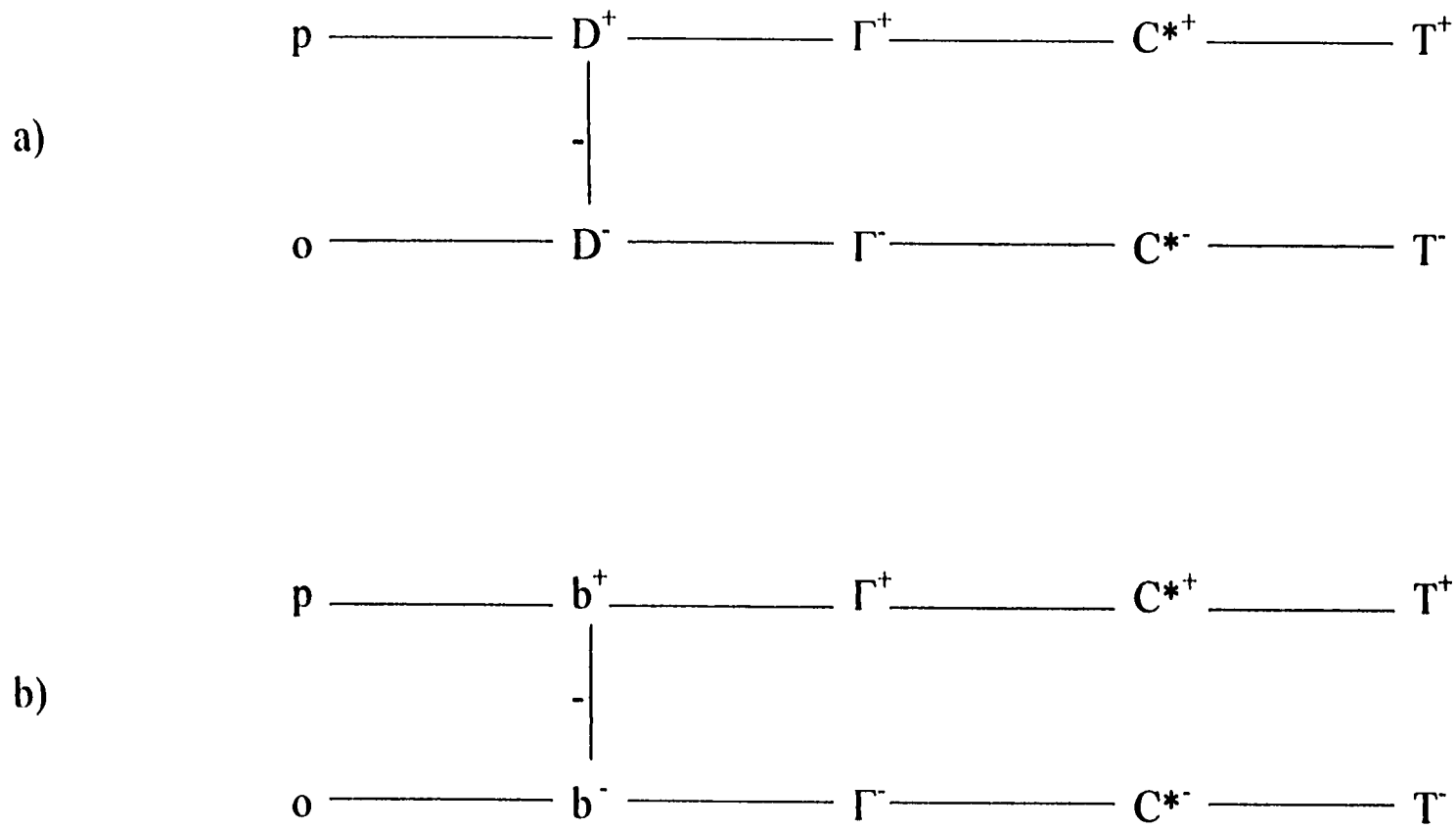

Figure 1: a) actors who differ on an existing diffuse status characteristic

b) actors who differ on an emergent behavior interchange pattern/status element

Appendix: Linear Contrast Test

Given four experimental conditions (1-4), the null hypothesis for a test of the statistical significance of the difference of the difference between the means of Conditions 1 and 3 and the means of Conditions 2 and 4 would be:

$$H_o: \mu_1 - \mu_2 - \mu_3 - \mu_4 = 0$$

The test statistic for this contrast, which simplifies to the t distribution for significance tests, is:

$$\text{test statistic} = \frac{\mu 1 - \mu 2 - \mu 3 + \mu 4}{(n * 3 \; c_i^2 * MSE)^{1/2}}$$

where: n = number of observations per cell = 20

c_i = coefficients in front of μ

$c_1 = 1$

$c_2 = -1$

$c_3 = -1$

$c_4 = 1$. $3 \; c_i^2 = 4$

MSE = Mean Square Error from Analysis of Variance (ANOVA) test

MSE = .136

For this specific Linear Contrast Test, the t value necessary to determine significance would be:

$$t_{N-a} = t_{76} = 1.96, \quad \alpha = .025$$

where:

N = 80 (number of observations)

a = 4 (number of conditions)

For this specific test:

$$\text{test statistic} = \frac{(.5375) - (.6050) - (.4475) + (.4275)}{(\ (20) * (4) * (.136)\ )^{1/2}}$$

$$= -.0265$$

This test statistic is not statistically significant in comparison to the $t_{76} = 1.96$ test value.